



September 30, 2026

Town of Deerpark
420 Rte 209
Huguenot, NY 12746

RE: Dragon Springs Site Plan - FEIS Technical Considerations Regarding Aquifer and Waterbody Water Quality and Water Supply Availability

The daily planned quantity of wastewater incident to the high-yield valley bottom aquifer poses a significant water quality threat. On behalf of Deerpark Rural Alliance and NYenvironcom, HydroQuest has reviewed hydrologic portions of the Dragon Springs FEIS. The significant planned increase in size and potential capacity of the planned subsurface absorption fields raise the question as to whether the fields can adequately handle (i.e., assimilate) 98,000 gpd without compromising the quality of the valley bottom sand and gravel aquifer and protected receiving streams and river. Rigorous soil testing and analysis, as well as hydrologic testing beneath the absorption fields, well beyond percolation testing, should be conducted and provided for Board and public review prior to further project consideration.



Appendix C, Sheet C-1, shows the close proximity of the subsurface absorption fields to the Basher Kill River. A standard homeowner oil tank holds 275 gallons. Subsurface wastewater discharge of 98,000 gpd is equivalent in volume to the discharge of 356 homeowner oil tanks daily, every day - year-round. This is more than six times the present current daily water use. This is a lot of potentially not 100 percent treated wastewater entering the groundwater flow system. Soils can only "*cleanse*" a finite quantity of contaminated wastewater, depending on a number of factors including soil type, particle size distribution, soil permeability, effective porosity, hydraulic gradient, and percent saturation. Detailed analysis of these factors, based on site-specific testing, should be presented prior to project advancement as the absorption fields may not be capable of supporting the proposed increase in project size over time. Appendix D provides values of onsite percolation test rates ranging from 4.6 in/hr to 12 in/hr (5 to 13 minutes per inch). These relatively fast infiltration rates provide evidence of a direct hydraulic connection between the planned, expansive, absorption fields and the underlying aquifer. Thus, additional hydrologic testing and comprehensive soil testing are warranted to examine the interconnection between subsurface wastewater infiltration, nearby waterways, the underlying aquifer, and potential surface water and groundwater quality degradation of valuable and vulnerable natural resources.

Similarly, project scale and design should not be considered absent empirically based well yield values determined via NYSDOH and NYSDEC aquifer testing procedures. Pages 36 and 37 of the FEIS state that Well #3 has an **estimated capacity** of about 40 gallons per minute. Page 36 states: "*Based on well logs, Well #4 **can potentially produce 100 GPM.***" (emphasis added) Oddly, page 37 of the FEIS states: "*There is no aquifer beneath the Project Site.*" If this were the case there would be no water available to support project expansion or current land use.

Page 37 of the FEIS states: "*Pump Testing & water quality testing will be completed as part of the outside agency permitting process with the NYSDEC & the OCDOH.*" Hydrogeologically, this is not a prudent, justifiable, or defensible approach to advance project approval. Most Planning Board's following SEQR procedures are keenly interested in documentation of groundwater availability BEFORE potentially approving project size and design. **Project size, design, and approval should occur AFTER the quantity of available groundwater is proven, not before.**

Returning to the large daily gallonage of wastewater planned for subsurface disposal, there is real risk that over time soil capacity may be overwhelmed resulting in potential degradation of both surface and groundwater resources. Should this expansion plan receive approval it should have three important, required, components. These are 1) a series of groundwater monitoring wells constructed downgradient of the absorption fields that are tested quarterly, 2) a contingency plan to immediately cease additional subsurface wastewater discharge in the event of contaminant detection, and 3) a groundwater remedial plan designed to stop expansion of a contaminant plume and remediate impacted groundwater. Comprehensive baseline groundwater quality testing and characterization should precede project approval.

Sincerely yours,

A handwritten signature in cursive script that reads "Paul A. Rubin".

Paul A. Rubin, Professional
Geologist; Hydrogeologist